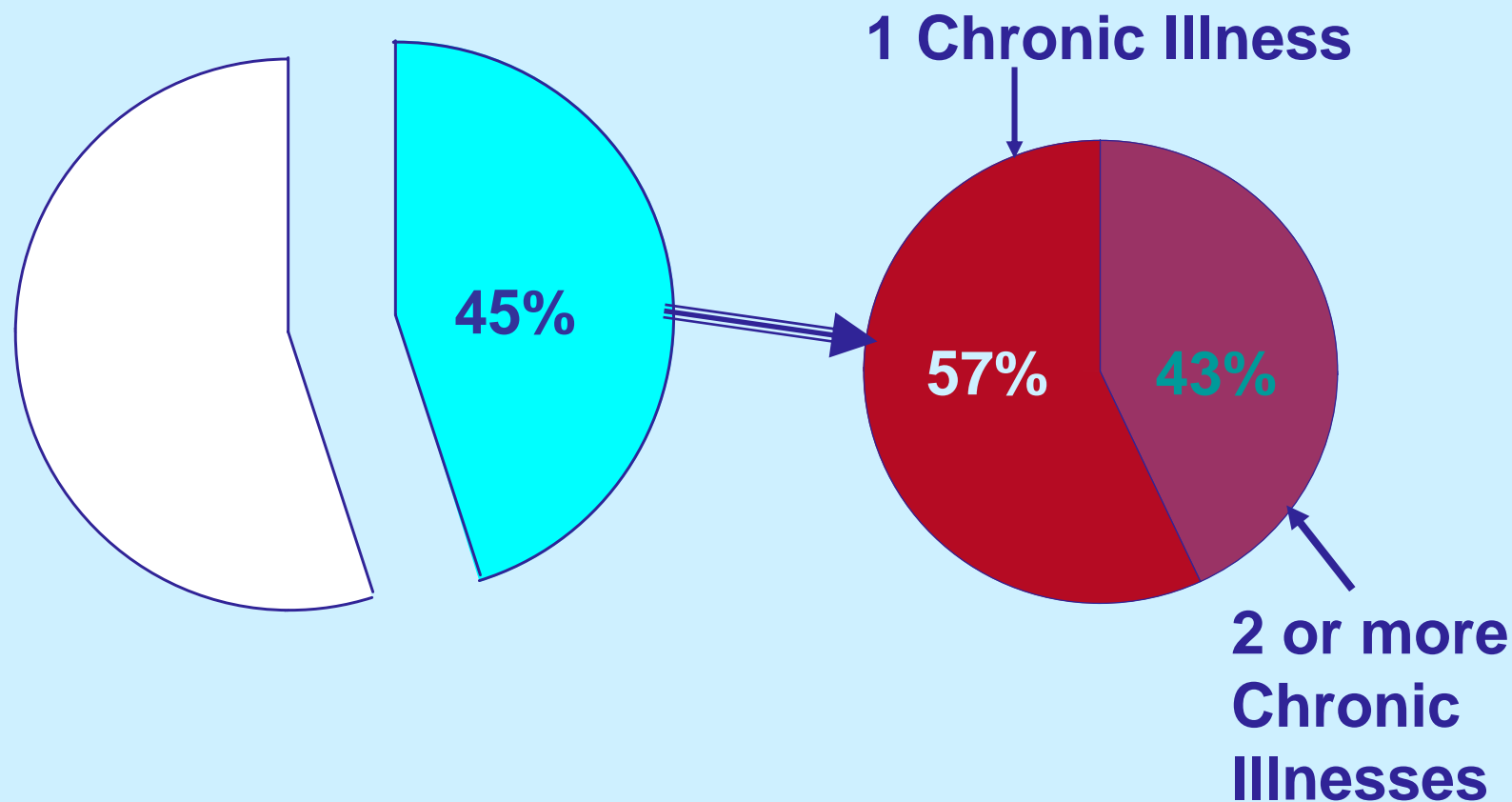


Self-Management Support for Patients with Chronic Illness Is it Enough?

Tom Bodenheimer MD
**UCSF Department of Family and
Community Medicine**

% of People in US with a Chronic Illness



Hoffman et al, JAMA 1996;276:1473

Chronic Illness: Prevalence and Health Costs



Hoffman et al. JAMA 1996;276:1473

Chronic care quality

- Half of discharged CHF patients are readmitted within 90 days [Ni et al. Arch Int Med 1998;158:1231]
- Less than half of eligible atrial fibrillation patients receive warfarin [Samsa et al. Arch Int Med 2000;160:967]
- 66% of people with hypertension are inadequately treated [JNC 7, JAMA 2003;289:2560.]
- 63% of people with diabetes have HbA1c levels greater than 7.0% [Saydah et al. JAMA 2004;291:335]
- 79.9% of children (<18 years) with asthma have their asthma in optimal control [Haltermann et al. Ambul Pediatrics 2007;7:153]

Bad system

Tyranny of the urgent



Tyranny of the urgent

- **Primary care clinicians have too many issues to deal with in the average 18 minute visit [Mechanic et al. NEJM 2001;344:198]**
- **Acute problems crowd out time for routine management of chronic illness**

Total system failure

- A physician with a typical panel of 2500 patients would spend 7.4 hours per working day to provide all recommended preventive care
- *Plus* 10.6 hours per day to provide all recommended chronic care.

Yarnell et al. Am J Public Health 2003;93:635.

Ostbye et al. Ann Fam Med 2005;3:209.

Chronic Care Model



Chronic Care Model components

- ✓ **Decision support**
 - **Clinical practice guidelines**
 - **Clinician education**
- **Delivery system redesign**
 - **Planned visits**
 - **Care management**
 - **Primary care teams**
- **Clinical information systems**
 - **Clinician feedback**
 - **Reminders**
 - **Registries**
- **Self-management support**

What are we doing next?

- 1. Discussing self-management support**
- 2. Discussing the limits of self-management support and the need for public health solutions**

What is self-management?

- ***Self-management*** is what people do every day: decide what to eat, whether to exercise, if and when they will monitor their health or take medications.
- People who are motivated to make daily decisions and choose actions favoring healthy behaviors are sometimes called “good self-managers.”

Bodenheimer et al. Helping Patients Manage their Chronic Conditions. California Healthcare Foundation, 2004 www.chcf.org

What is self-management support?

- *Self-management support* is what health caregivers do to assist and encourage patients to become good self-managers.

The components of self-management support

✓ Provide information

- Intensive skills training (disease specific)**
- Encouraging healthy behavior change**
- Teach patients problem-solving skills**
- Assisting patients with psychosocial issues and the emotional impact of having a chronic condition**
- Provide ongoing and regular follow-up**
- Encourage and train patients to become active participants in their care**

Providing information: the 50% rule

- **Asking patients to repeat back what the physician told them, half get it wrong [Schillinger et al. Arch Intern Med 2003;163:83]**
- **Asking patients: “How are you supposed to be taking this medication?” -- 50% take it differently than prescribed [Schillinger et al. Medication mis-communication, in Advances in Patient Safety (AHRQ, 2005)]**
- **50% of patients leave the physician office visit without understanding what the physician said [Roter and Hall. Ann Rev Public Health 1989;10:163]**
- **Failure to provide information to patients about their chronic condition is associated with unhealthy behaviors. If people don't know what to do, they don't do it. [Kravitz et al. Arch Intern Med 1993;153:1869. O'Brien et al. Medical Care Review 1992;49:435]**

Providing information

- **Patient education on diabetes improves patient knowledge, but does not improve glycemic control**
- **59 trials of hypertension management: patient education alone does not work**

Norris et al. *Diabetes Care* 2001;24:561

Fahey et al. *Cochrane Review* 2005; Jan 25;(1):CD005182.

Providing information

- **Cochrane review of 12 trials on asthma: patient education alone does not improve outcomes nor frequency of asthma-related ED visits [Gibson et al. Cochrane Review 2002;(2):CD001005]**
- **Cochrane review of arthritis patient education alone: no long term benefits for adults with rheumatoid arthritis [Riemsma et al. Cochrane Review 2003;(2):CD003688]**
- **Interventions to improve medication adherence, education alone had no effect [Haynes et al. Cochrane Review 2002;(2):CD000011]**

Providing information

Information-only patient education is necessary but not sufficient to achieve improved outcomes



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Intensive skills training

Asthma

- **Showing patients how to use inhalers and spacers and having them demonstrate that they can do it**
- **Teaching the difference between controller and rescue inhalers; understanding this difference is a key self-management skill**
- **Many patients with asthma do not understand that they need to take their controller inhaler even when they feel well.**
- **Taking controllers regularly is strongly associated with reduced ED visits and hospitalizations**
- **Making sure patients really know how to use asthma action plans is also evidence based to reduce ED visits if there is follow-up (not just one-time teaching)**

Stern et al. Ann Allergy Asthma Immunol 2006;97:402.

Intensive skills training

Atrial Fibrillation

- **Compared with anti-coagulation management in primary care practice, patients who self-monitor and self-adjust their warfarin doses at home have INR values more frequently in the target range. [Sawicki. JAMA. 1999;281:145]**
- **Literature review of warfarin self-monitoring: Home self-monitoring is more effective than physician monitoring. Patients do it better than physicians. [Yang et al. Am J Hematol. 2004;77:177]**

Intensive skills training

Diabetes

- **Home glucose testing is *not* associated with improved glycemic control in patients with type 2 diabetes not using insulin, and is questionable in insulin-dependent type 2 patients** [Davis, Diabetes Care 2006;29:1764; Cochrane Review 2005;CD005060]
- **For insulin-dependent type 2 diabetes, patients self-administering their insulin based on algorithm had better glycemic control than physician-managed insulin, with no difference in hypoglycemic episodes.** [Davies et al. Diabetes Care 2005;28:1282; Davidson et al. Am J Med 2005;118(suppl 9A):27S]



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Collaboratively setting a goal

Kate Lorig's question: "Is there anything you would like to do this week to improve your health?"

Other things?

**Physical
activity**

**Reducing
stress?**

**Taking
medications**

Healthy diet

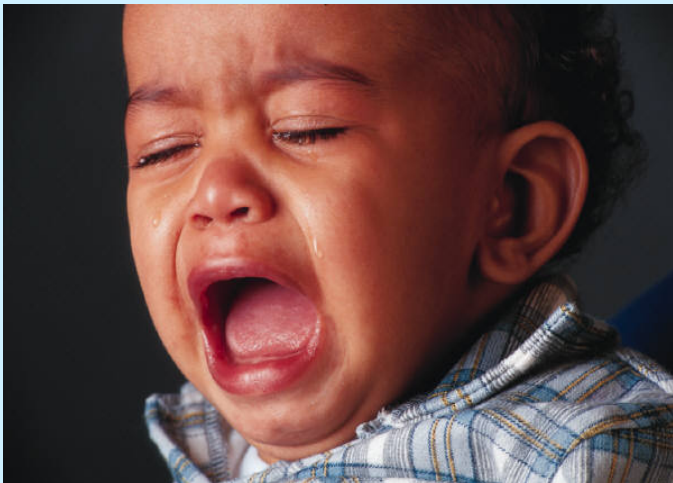
**Checking
sugars**

Goal-setting and action plans

- **Patient chooses goal: to lose weight**
- **Unrealistic action plan: “I will lose 20 pounds in the next month.”
“I will walk 5 miles a day.”**
- **Realistic and specific action plan: “I will eat one candy bar each day rather than the 5 per day I eat now.” “I will walk for 15 minutes each day after lunch.”**
- **Success in achieving an action plan increases self-efficacy (confidence that one can improve one’s life)**

Self management support

**If people don't want to do
something,
they won't do it**



**Kate Lorig RN, Dr. PH
Stanford Medical School**

Goal-setting and action plans

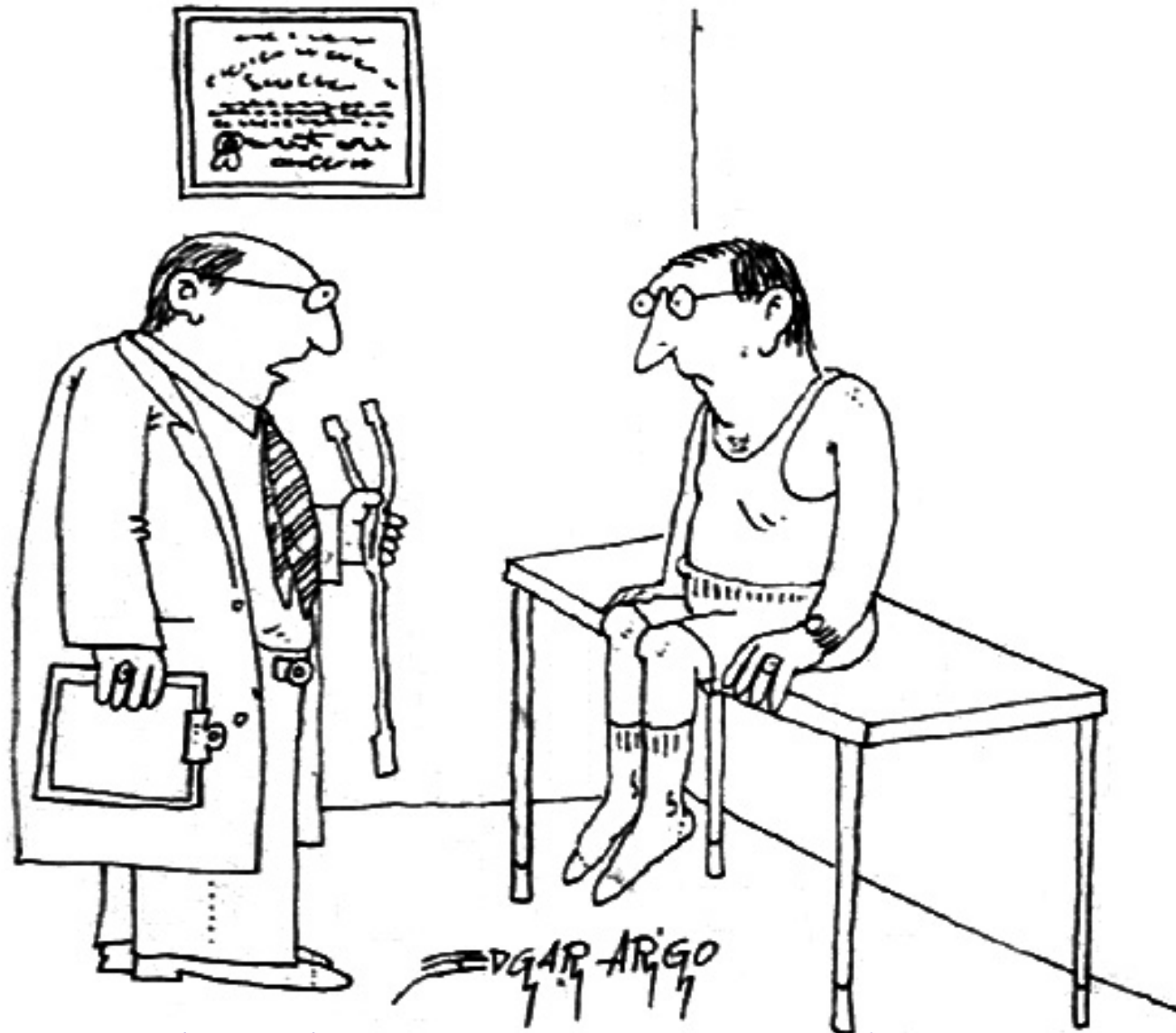
- Ammerman et al. reviewed 92 studies involving behavioral interventions to improve diet.
- Goal setting was associated with a greater likelihood of obtaining a significant intervention effect for 3 outcomes (less total fat, less saturated fat, and more fruits/vegetables).

Ammerman et al. Preventive Medicine 2002;35:25.

Goal-setting and action plans

- **Cullen reviewed 13 studies utilizing goal-setting in adult nutrition education.**
- **Persons engaged in goal setting to improve diet did better in terms of self-reported dietary change, weight loss and improved serum cholesterol than control groups.**

Cullen et al. J Am Diet Assoc 2001;101:562.



There is no improvement, Henry. Are you sure
you've given up *everything* you enjoy?

Goal-setting and action plans

- **In 2004, Shilts reviewed 28 studies of goal-setting for dietary and physical activity behavior change.**
- **32% of the studies were evaluated as fully supporting the use of goal setting.**
- **The review concluded that goal setting has shown some promise in promoting dietary and physical activity behavior change among adults**

Shilts et al. Am J Health Promotion 2004;19:81.

Goal-setting and action plans

- **The American Diabetes Association website's guide to changing habits is entitled "Setting Goals Helps You Take Charge of Diabetes." The guide suggests making a specific and realistic action plan, for example, walk for half an hour 3 times a week [www.diabetes.org]**
- **In three separate statements of standards for diabetes education, the American Association of Diabetes Educators recommends that diabetes education should include goal-setting [www.aadenet.org]**
- **The American Heart Association scientific statement on treating obesity-related heart disease risk factors recommends self-monitoring, goal-setting, stress management and social support as behavioral strategies for improving diet and physical activity. [www.americanheart.org]**



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Problem Solving

- **1. Identify the problem (the most difficult and important step).**
- **2. List ideas to solve the problem**
- **3. Pick one, try it for two weeks**
- **4. Assess the results**
- **5. If it doesn't work, try another idea**
- **6. Utilize other resources (family, friends, professionals)**
- **7. If nothing seems to work, accept that the problem may not be solvable now.**

**Lorig, Holman, et al. Living a Healthy Life with Chronic Conditions.
Palo Alto, CA: Bull Publishing, 2000**

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Follow-up

- **Regular, sustained follow-up is crucial to self-management**
- **Several methods are available, whichever patient prefers (in-person, phone, email, web)**
- **Make sure promised follow-up happens; patient trust can be destroyed by missed follow-up**
- **Easiest is group visits; follow-up takes place in the group**
- **Follow-up can be done by other patients (buddy system)**

Follow-up: diabetes

- **Cochrane Review (Griffin and Kinmonth): patients with diabetes who had regular follow-up had better HbA1c levels than without such follow-up [Griffin and Kinmonth. Cochrane Review 2000;(2):CD000541]**
- **Norris et al. meta-analysis: the benefits of self-management for patients with diabetes diminishes over time; sustained regular follow-up is needed. Total time spent with a patient is closely correlated with improved glycemic control [Diabetes Care 2002;25:1159]**

Follow-up: hypertension

- **A review of 59 trials of hypertension management. Regular follow-up was essential to improving blood pressures [Fahey et al. Cochrane Review 2005; Jan 25;(1):CD005182]**

Follow-up: CHF

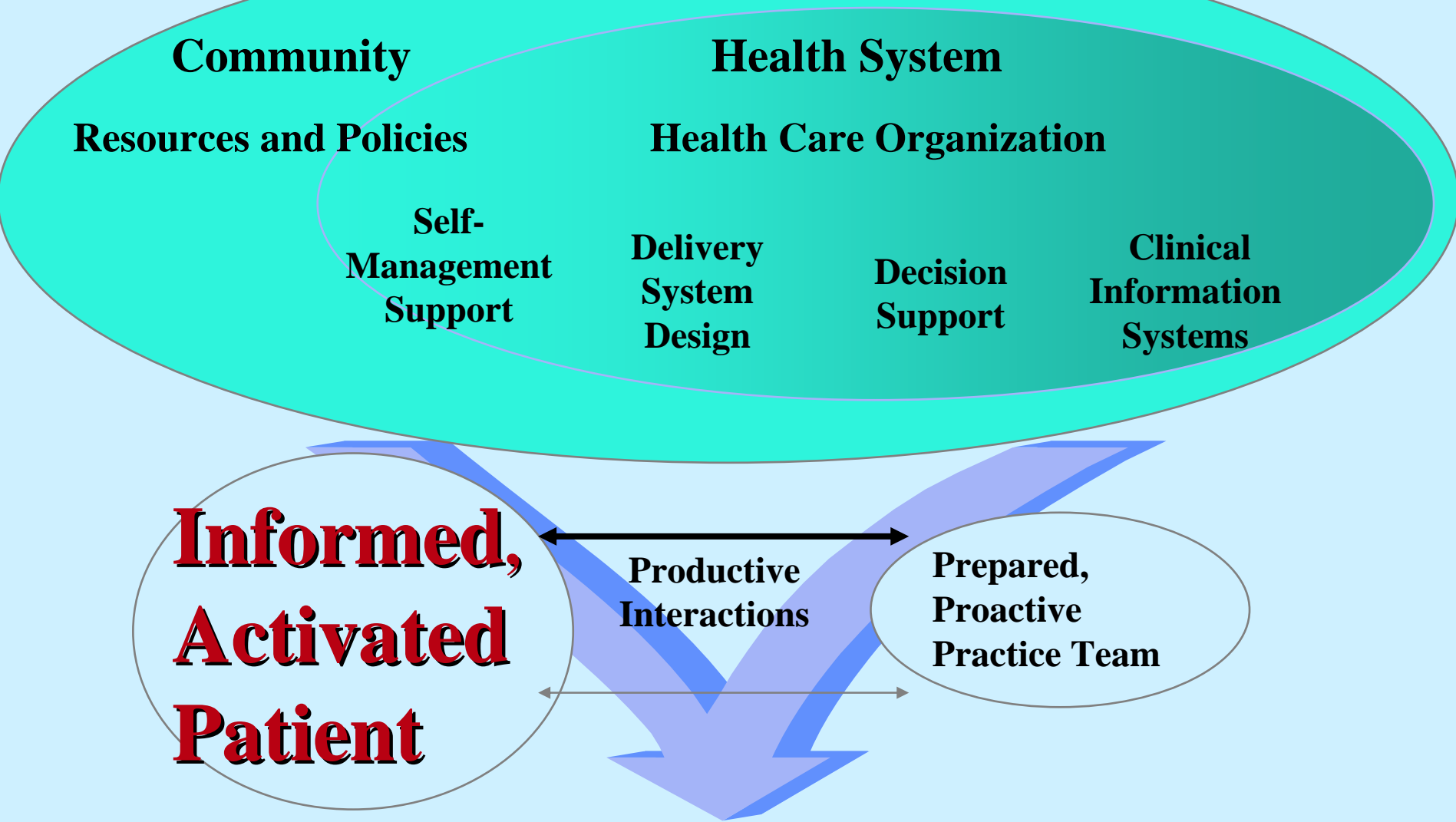
- **CHF: meta-analysis of 30 trials**
- **Regular post-hospital follow-up by nurses, pharmacists, dieticians and/or social workers**
- **Compared with controls, intervention group showed reduced**
 - **CHF admissions by 30%**
 - **All-cause admissions by 13%, and**
 - **All-cause mortality by 20%.**

Holland et al. Heart 2005;91:899.

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Chronic Care Model



The activated patient

- **Empowerment classes with goal-setting, action plans, teaching problem-solving and coping skills: patients had improved HbA1c compared with controls [Anderson, Funnell et al. Diabetes Care 1995;18:943]**

The activated patient

- **Chronic Disease Self-Management Program**
- **People with a variety of chronic illnesses attend 7 classes learning coping and problem-solving skills, goal-setting and action plans.**
- **6 months after the classes, participants had improved symptoms, fewer hospitalizations and lower total health care costs compared with controls [Lorig et al. Medical Care 1999;37:5]**
- **2 years after the classes, improvements in quality of life scores and reduced physician and ED visits [Lorig et al. Medical Care 2001;39:1217]**

Informed, activated patients

- **Patients engaged in collaborative decision-making become active participants in their care**
- **They have better health-related behaviors and clinical outcomes compared with those who remain passive recipients of care.**

Heisler et al. J Gen Intern Med 2002;17:243

Tentative conclusions from this evidence

- **Patients don't understand what happened in the medical visit 50% of the time**
- **Information is necessary but not sufficient to improve chronic disease outcomes; in addition, patients need to be active participants in the management of their conditions**
- **Patients need to learn self-management skills. Self-monitoring (blood sugars, blood pressures, asthma symptoms, warfarin doses) is most successful if patients learn how to react to a measurement.**

Tentative conclusions from this evidence

- **The triad of goal-setting, action-planning and problem-solving, while not rigorously “evidence-based,” appears to be central to improving chronic disease behaviors and outcomes**
- **Regular and sustained follow-up is critical to any chronic disease management or prevention program**

The limits of self-management support

- **Caregivers can do collaborative goal-setting every day for 10 years to improve healthy eating**
- **In the meantime, the average child sees over 40,000 TV commercials per year, many for unhealthy foods. Each hour increase in TV watching is associated with an additional 167 calories per day intake. [Arch Ped Adoles Med 2006;160:436]**

The limits of self-management support

- **Public health measures have done far more for smoking cessation than individual counseling**
- **We can spend hours teaching kids with asthma how to use their inhalers correctly -- skills training**
- **At the same time, air quality and substandard housing triggers asthma attacks**

The limits of self-management support

- **Self-management approach: individuals can control their own behaviors**
- **Public health approach: the social environment around individuals largely controls individuals' behaviors**

**Fisher et al. Ecological approaches to self-management.
AJPH 2005;95:1523**

The limits of self-management support

- **In self-management literature, “empowerment” means individuals gaining more control over their lives through better coping skills**
- **In public health, “empowerment” means a “social action process that promotes participation of people...towards the goals of increased individual and community control, political efficacy, improved community life and social justice.”**

Wallerstein, Am J Health Promotion 1992;6:197

A true champion: Elisa Nicholas

- **As a pediatrician, organized Long Beach Children's Clinic to provide perfect care for kids with asthma**
- **Trained promotoras to work with families with asthma**
- **Taught parents asthma self-management skills**
- **Trained private physicians and their medical assistants all over Long Beach to replicate this work**
- **Organized the community through the Long Beach Alliance for Children with Asthma**
 - **To reduce the disastrous air pollution from the Port of Long Beach, the second largest port in the US**
 - **After a study linking asthma with proximity to freeways, successfully opposed the expansion of the I-710 freeway going through Long Beach**